AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

Claim 1 (Cancelled)

2. (Previously Presented) The front teleconverter lens system according to claim 17, wherein

the first lens group includes at least one pair of a convex surface and a concave surface adjacent with each other and the following conditional expression is satisfied:

$-3.0 < |Pd|/Ps < -0.05$

where Ps denotes a combined refractive power of the convex surface and the concave surface of the pair, and Pd denotes a refractive power of the diffractive optical surface.

3. (Original) The front teleconverter lens system according to claim 2, wherein

the pair of a convex surface and a concave surface adjacent with each other have an air space there between.

4. (Cancelled)

5. (Previously Presented) The front teleconverter lens system according to claim 3, wherein

the first lens group has a biconvex lens and at least one negative lens, and

the second lens group has a biconcave lens at the most image side, and wherein

the following conditional expression is satisfied:

$0.03 < \varphi R/fd < 1.0$

where fd denotes the focal length of a lens on which the diffractive optical surface is formed.

6. (Original) The front teleconverter lens system according to claim 5, wherein

the diffractive optical surface is arranged on one of the lens surfaces in the first lens group, and the following conditional expression is satisfied:

$1.0 < fF/DFR < 10.0$

where fF denotes the focal length of the first lens group, and DFR denotes a distance along the optical axis between the first lens group and the second lens group.

7. (Original) The front teleconverter lens system according to claim 6, wherein

the following conditional expression is satisfied:

$1.0 < fd/L < 10.0$

where fd denotes the focal length of a lens on which the diffractive optical surface is formed, and L denotes a distance between the most object side lens surface of the first lens group and the most image side lens surface of the second lens group.

8. (Original) The front teleconverter lens system according to claim 2, wherein

the pair of a convex surface and a concave surface adjacent with each other form a single cemented surface.

9. (Cancelled)

10. (Previously Presented) The front teleconverter lens system according to claim 8, wherein

the first lens group has a biconvex lens and at least one negative lens, and

the second lens group has a biconcave lens at the most image side, and wherein

the following conditional expression is satisfied:

$0.03 < \varphi R/fd < 1.0$

where fd denotes the focal length of a lens on which the diffractive optical surface is formed.

11. (Original) The front teleconverter lens system according to claim 10, wherein

the diffractive optical surface is arranged on one of the lens surface in the first lens group, and

the following conditional expression is satisfied:

$1.0 < fF/DFR < 10.0$

where fF denotes the focal length of the first lens group, and DFR denotes a distance along the optical axis between the first lens group and the second lens group.

12. (Original) The front teleconverter lens system according to claim 11, wherein

the following conditional expression is satisfied:

$1.0 < fd/L < 10.0$

where fd denotes the focal length of a lens on which the diffractive optical surface is formed, and L denotes a distance between the most object side lens surface of the first lens group and the most image side lens surface of the second lens group.

13. (Cancelled)

14. (Original) The front teleconverter lens system according to claim 2, wherein

the first lens group has a biconvex lens and at least one negative lens, and

the second lens group has a biconcave lens at the most image side, and wherein

the following conditional expression is satisfied:

$0.03 < \varphi R/fd < 1.0$

where fd denotes the focal length of a lens on which the diffractive optical surface is formed.

15. (Original) The front teleconverter lens system according to claim 2, wherein

the diffractive optical surface is arranged on one of the lens surface in the first lens group, and the following conditional expression is satisfied:

$1.0 < fF/DFR < 10.0$

where fF denotes the focal length of the first lens group, and DFR denotes a distance along the optical axis between the first lens group and the second lens group.

16. (Original) The front teleconverter lens system according to claim 2, wherein

the following conditional expression is satisfied:

$1.0 < fd/L < 10.0$

where fd denotes the focal length of a lens on which the diffractive optical surface is formed, and L denotes a distance between the most object side lens surface of the first lens group and the most image side lens surface of the second lens group.

17. (Previously Presented) A front teleconverter lens system having three lenses or more, and an afocal magnification, upon attaching to an imaging lens, of 1.4 or more, and forming an afocal optical system;

the front teleconverter lens system comprising, in order from an object:

a first lens group having positive refractive power; and

a second lens group having negative refractive power;

a diffractive optical surface being arranged in at least one of the first lens group and the second lens group; and

wherein the following conditional expression is satisfied:

$1.2 < \varphi F / \varphi R < 10$

where φF denotes the effective diameter of the most object side lens surface of the first lens group, and φR denotes the effective diameter of the most image side lens surface of the second lens group;

wherein an incident angle of the principal ray passing through the maximum image height to the diffractive optical surface is 15 degrees or less.

18. (Original) The front teleconverter lens system according to claim 17, wherein

the first lens group has a biconvex lens and at least one negative lens, and

the second lens group has a biconcave lens at the most image side, and wherein

the following conditional expression is satisfied:

$0.03 < \varphi R / fd < 1.0$

where fd denotes the focal length of a lens on which the diffractive optical surface is formed.

19. (original) The front teleconverter lens system according to claim 18, wherein

the diffractive optical surface is arranged on one of the lens surface in the first lens group, and the following conditional expression is satisfied:

$$1.0 < fF/DFR < 10.0$$

where fF denotes the focal length of the first lens group, and DFR denotes a distance along the optical axis between the first lens group and the second lens group.

20. (Original) The front teleconverter lens system according to claim 17, wherein

the diffractive optical surface is arranged on one of the lens surface in the first lens group, and the following conditional expression is satisfied:

$$1.0 < fF/DFR < 10.0$$

where fF denotes the focal length of the first lens group, and DFR denotes a distance along the optical axis between the first lens group and the second lens group.

21. (Original) The front teleconverter lens system according to claim 17, wherein

the following conditional expression is satisfied:

$$1.0 < fd/L < 10.0$$

where fd denotes the focal length of a lens on which the diffractive optical surface is formed, and L denotes a

distance between the most object side lens surface of the first lens group and the most image side lens surface of the second lens group.

22. (Previously Presented) A front teleconverter lens system having three lenses or more, and an afocal magnification, upon attaching to an imaging lens, of 1.4 or more, and forming an afocal optical system;

the front teleconverter lens system comprising, in order from an object:

a first lens group having positive refractive power; and

a second lens group having negative refractive power;

a diffractive optical surface being arranged in at least one of the first lens group and the second lens group; and

wherein the following conditional expression is satisfied:

$1.2 < \varphi F / \varphi R < 10$

where φF denotes the effective diameter of the most object side lens surface of the first lens group, and φR denotes the effective diameter of the most image side lens surface of the second lens group;

wherein the first lens group has a biconvex lens and at least one negative lens, and

the second lens group has a biconcave lens at the most image side, and wherein

the following conditional expression is satisfied:

$0.03 < \varphi R/fd < 1.0$

where fd denotes the focal length of a lens on which the diffractive optical surface is formed.

23. (Original) The front teleconverter lens system according to claim 22, wherein

the diffractive optical surface is arranged on one of the lens surface in the first lens group, and the following conditional expression is satisfied:

$1.0 < fF/DFR < 10.0$

where fF denotes the focal length of the first lens group, and DFR denotes a distance along the optical axis between the first lens group and the second lens group.

24. (Original) The front teleconverter lens system according to claim 22, wherein

the following conditional expression is satisfied:

$1.0 < fd/L < 10.0$

where fd denotes the focal length of a lens on which the diffractive optical surface is formed, and L denotes a distance between the most object side lens surface of the first lens group and the most image side lens surface of the second lens group.

Claims 25-26 (Cancelled)

27. (Previously Presented) A front teleconverter lens system having three lenses or more, and an afocal magnification, upon attaching to an imaging lens, of 1.4 or more, and forming an afocal optical system;

the front teleconverter lens system comprising, in order from an object:

a first lens group having positive refractive power; and

a second lens group having negative refractive power;

a diffractive optical surface being arranged in at least one of the first lens group and the second lens group;

the first lens group comprising at least one pair of a convex surface and a concave surface adjacent with each other; and

the following conditional expression being satisfied:

$-3.0 < |Pd|/Ps < -0.05$

where Ps denotes a combined refractive power of the convex surface and the concave surface of the pair, and Pd denotes a refractive power of the diffractive optical surface,

wherein the first lens group has a biconvex lens and at least one negative lens, and

the second lens group has a biconcave lens at the most image side, and wherein

the following conditional expression is satisfied:

$0.03 < \varphi R/fd < 1.0$

where fd denotes the focal length of a lens on which the diffractive optical surface is formed, and φR denotes the effective diameter of the most image side lens surface of the second lens group.

28. (Previously Presented) A front teleconverter lens system having three lenses or more, and an afocal magnification, upon attaching to an imaging lens, of 1.4 or more, and forming an afocal optical system;

the front teleconverter lens system comprising, in order from an object:

a first lens group having positive refractive power; and

a second lens group having negative refractive power;

a diffractive optical surface being arranged in at least one of the first lens group and the second lens group;

the first lens group comprising at least one pair of a convex surface and a concave surface adjacent with each other; and

the following conditional expression being satisfied:

$-3.0 < |Pd|/Ps < -0.05$

where Ps denotes a combined refractive power of the convex surface and the concave surface of the pair, and Pd denotes a refractive power of the diffractive optical surface,

wherein an incident angle of the principal ray passing through the maximum image height to the diffractive optical surface is 15 degrees or less.

29. (New) A method for forming an image of an object and magnifying a total focal length of an imaging lens, comprising:

combining, with the imaging lens, a lens system having three lenses or more and including, in order from the object, a first lens group having positive refractive power and a second lens group having negative refractive power, with a diffractive optical surface being arranged in at

least one of the first lens group and the second lens group, and an incident angle of the principal ray passing through the maximum image height to the diffractive optical surface being 15 degrees or less;

the lens system also satisfying the following conditional expression:

$$1.2 < \varphi F / \varphi R < 10$$

wherein φF denotes the effective diameter of the most object side lens surface of the first lens group, and φR denotes the effective diameter of the most image side lens surface of the second lens group.

30. (New) The method according to claim 29,

wherein the first lens group includes at least one pair of a convex surface and a concave surface adjacent to each other, and the following conditional expression is satisfied:

$$-3.0 < |Pd| / Ps < -0.05$$

where Ps denotes a combined refractive power of the convex surface and the concave surface of the pair, and Pd denotes a refactive power of the diffractive optical surface.

31. (New) A method for forming an image of an object and magnifying a total focal length of an imaging lens, comprising:

combining, with the imaging lens, a lens system having three lenses or more and including, in order from the object, a first lens group having positive refractive power and a second lens group having negative refractive power, with a diffractive optical surface being arranged in at least one of the first lens group and the second lens group, the first lens group having a biconvex lens and at least one negative lens, and the second lens having a biconcave lens at the most image side;

the lens system also satisfying the following conditional expressions:

$$1.2 < \varphi F / \varphi R < 10$$

$$0.03 < \varphi R / fd < 1.0$$

where φF denotes the effective diameter of the most object side lens surface of the first lens group, φR denotes the effective diameter of the most image side lens surface of the second lens group, and fd denotes the focal length of a lens on which the diffractive optical surface is formed.

32. (New) The method according to claim 31,

wherein the first lens group includes at least one pair of a convex surface and a concave surface adjacent to each other, and the following conditional expression is satisfied:

$$-3.0 < |Pd|/Ps < -0.05$$

wherein Ps denotes a combined refractive power of the convex surface and the concave surface of the pair, and Pd denotes a refractive power of the diffractive optical surface.